NIOSH Health Hazard Evaluation Program

What is a Health Hazard Evaluation?

A Health Hazard Evaluation (HHE) is an evaluation of possible health hazards at a workplace. Employees, employee representatives, or employers can request an HHE if they have concerns about health hazards at work. During an evaluation, NIOSH investigators evaluate whether a health hazard to employees caused by exposure to hazardous materials or conditions exists.

Workplace agents NIOSH has studied include:

- chemicals such as lead, bromopropane, and cisplatin
- biological agents such as anthrax and mold
- physical agents such as heat stress, noise, radiation, and ergonomic stressors

Who Can Request an HHE?

Preparing cisplatin solution in the pharmacy for a mock inter-peritoneal procedure.

The following people can request an HHE:

- A current employee + two coworkers for a total of three signatures
- One employee can make the request without additional signatures in a work area with three or fewer employees
- Union representatives
- Employers
- Employees, their representatives, or any management official of a federal, state, or local government agency

In some cases NIOSH may not have the authority to do an investigation without the cooperation of the employer.

How is the Privacy of Employees Protected?

If desired, NIOSH will not disclose the name(s) of the person(s) who requested the HHE to the employer. The Occupational Safety and Health Act prohibits employers from retaliating or punishing employees for making HHE requests or cooperating with NIOSH investigators.

NIOSH protects any individually identifiable medical results and information from records, questionnaires, or interviews with NIOSH investigators according to federal law. In HHE reports, this information is reported as group data.

What Happens During an HHE?

Once a request is received it is discussed by NIOSH health and safety experts to decide how the HHE Program will respond. The NIOSH project officer then contacts the requestor, the employer, and the local union representative (if any) to discuss the request and determine if a visit is needed to assess the current conditions in the workplace.

Field investigations are done for the highest priority concerns, which include those with serious health effects that could be related to the workplace, and new or emerging issues. Due to the complex nature of some HHEs, one or more site visits may be needed to complete an evaluation.

To evaluate the workplace, NIOSH may do the following:

- Observe production processes and employee work practices
- Collect samples from air and surfaces
- Interview employees
- Conduct medical tests or physical examinations of employees
- Review reports of injury and illness

Personal breathing zone air sampling for cisplatin during a mock inter-peritoneal procedure.

When NIOSH evaluates more common types of hazards a site visit is not always needed. When a field investigation is not done, the HHE Program usually discusses the concerns with the requestor and provides a written response that includes an assessment of the situation and, when needed, guidance on reducing or eliminating hazards.

How Are HHE Results Reported?

During the closing conference, NIOSH investigators discuss preliminary findings. Sometimes NIOSH provides written interim reports while an investigation is in progress.

When all the information and data have been analyzed, NIOSH publishes a final report that gives findings and recommendations. Copies of this report are sent to the requestor, the employer, employee representatives, OSHA, and other relevant agencies. The employer is required to post the final report in a place accessible to workers from all areas evaluated.

The final report is public information and is available to a wide audience so that others may benefit from the findings and recommendations. Final reports are posted on the NIOSH and CDC websites.

NIOSH has no authority to compel the employer to adopt its recommendations, yet experience has shown that many employers address problems identified in the HHE report.

Example HHE: Evaluation of Cisplatin Exposure

NIOSH received a management request for an HHE at a medical center. The HHE request was submitted because a new medical procedure was being proposed and some hospital staff were concerned about potential exposures to cisplatin.

Cisplatin is an antineoplastic oncology drug for treatment of certain cancers. During some procedures the cisplatin solution is placed directly into an open body cavity (inter-peritoneal) where the surgeon manipulates the target organs in an effort to increase cisplatin absorption. Cisplatin has been categorized as a probable carcinogen.

We visited the medical center to evaluate potential exposures to cisplatin during a mock demonstration of the new inter-peritoneal procedure. We collected general area and personal breathing zone air samples and wipe samples for cisplatin. We evaluated the effectiveness of the chemotherapy-approved gloves worn by the employees by asking employees to wear cotton gloves beneath their chemotherapy-approved gloves. These cotton glove samples were then analyzed for cisplatin.

Cisplatin was not detected in any general area air samples, personal breathing zone air samples, or cotton glove samples. Cisplatin was detected on one of the 15 wipe samples taken. This surface wipe sample was taken on the operating room floor near the surgical technician. No cisplatin was detected in surface wipe samples taken in the same area both prior to the inter-peritoneal procedure the room was sanitized. This suggests that staff effectively removed any cisplatin contamination following the inter-peritoneal procedure.

Donning cotton gloves under chemotherapy-approved gloves to evaluate breakthrough.

We recommended that employees continue to double-glove by wearing two pairs of chemotherapy-protective gloves. We also recommended that management stress the importance of minimizing splashes and spills to employees. Cisplatin solution splashes or spills should be cleaned up promptly with proper disposal in chemotherapy receptacles.

How Do I Find Out More Information?

To request an HHE electronically, find out more about the HHE Program, or learn about this HHE, visit www.cdc.gov/niosh/hhe/ or call 513-841-4382.

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